

REMARKS

This amendment is responsive to the Office Action of 9/17/2004. Reconsideration and allowance of claims 2-6, 8, 10, 12-14, and 19-21 are requested.

The Office Action

Claims 1, 7, 8, and 10-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Murakami, et al. (U.S. Patent No. 5,384,536) in view of Reynolds, et al. (U.S. Patent No. 6,704,592).

Claims 1, 7, 10-14 and 12-21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kormos, et al. (U.S. Patent No. 6,198,285) in view of Reynolds.

Claims 15 and 16 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Mault, et al. (U.S. Patent No. 6,610,012).

Claims 15 and 16 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Reynolds.

Claim 8 stands objected to as containing informalities.

Claims 2-6 stand allowed.

The Present Application

The present application is directed to a magnetic resonance apparatus with components both inside and outside of a magnetic resonance suite. The suite contains multiple receivers and multiple transmitters to facilitate wireless communication between various components in the scanner, a handheld wireless control unit, and out-of-suite control and processing components. Each coil that is wirelessly operated has an associated transmitter with a coil ID which is transmitted to identify the coil to the system. This transmission is preferably done at a frequency above 500 MHz.

Information is displayed to a user on the handheld unit. In addition to other aspects, a user can at least view a portion of a reconstructed image on the handheld unit. In some embodiments, the out-of-suite processing and control communicates directly with the scanner (via wireless transmitters and receivers) without the handheld unit as an intermediary.

**The Claims Distinguish Patentably
Over the References of Record**

Claim 8 now calls for the RF coil to transmit **44, 44'** the received resonance signals. It further calls for a receiver **42** and transmitter **32** which retransmits the resonance signal to an RF antenna **28** disposed inside the magnetic resonance suite that is connected to the image processing system. (The resonance signals can also be relayed by the remote unit **60**.) The combination of Murakami and Reynolds does not suggest this concept of wirelessly relaying the resonance signals. Murakami and Reynolds do not show transmission of resonance signals from an RF coil to an in-suite receiver, and an additional transmission to another in-suite antenna that is connected to the out-of-suite processing equipment. Additionally, the applicant believes that the present amendment to claim 8 should alleviate any confusion as to the relationship of the components recited in claim 8. It is therefore respectfully submitted that **claim 8** now distinguishes patentably and unobviously over the references of record.

Method **claim 13** has been amended to reflect aspects previously indicated as allowable in apparatus claim 2. It is therefore respectfully submitted that **claim 13** is now in condition for allowance.

Claim 14 now calls for wirelessly communicating an identification of an RF receiving coil at frequencies that do not interfere with the magnetic resonance signals. With interchangeable coils, problems can arise if the sequence control system or the image processing system thinks a different coil is in the examination region. Because coils tend to inductively couple, even a coil which is not being excited or used to receive resonance, but which is disposed in the bore, can cause problems. The radio frequency coil identification system enables even disconnected coils to be identified. The combination of Murakami and Reynolds does not address communicating a coil identification. Reynolds goes into detail about frequencies used for the transmission of other data, but fails to express a need for identifying RF coils. It is therefore respectfully submitted that **claim 14** and **claims 10 and 12** dependent therefrom now distinguish patentably and unobviously over the references of record.

Claim 21 now calls for communicating the magnetic resonance sequence selections from a hand held unit to an out-of-suite sequence control which wirelessly controls the in-suite coils. Resonance signals are communicated from the RF coil to

the out-of-suite image processor. The out-of-suite image processor sends images to the hand held unit. The remote 26 of Kormos controls the images displayed on the monitor 24. There is no suggestion of wireless communication of either resonance signals or images. It is therefore respectfully submitted that **claim 21** and **claims 19 and 20** dependent therefrom now distinguish patentably and unobviously over the references of record.

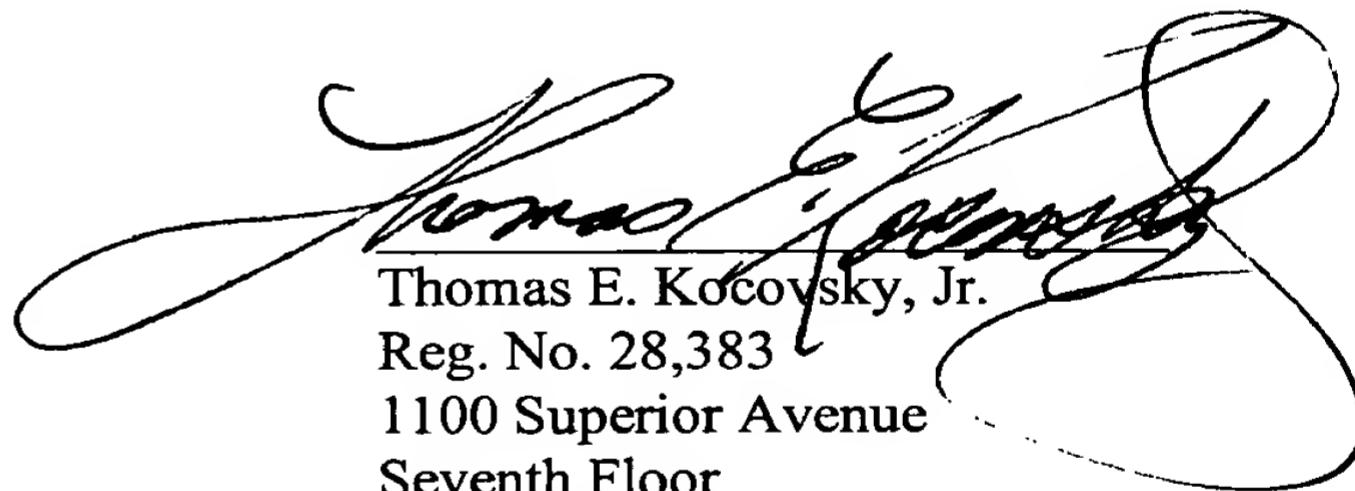
CONCLUSION

For the reasons set forth above, it is submitted that claims 2-6, 8, 10, 12-14, and 19-21 (all claims) distinguish patentably over the references of record and meet all statutory requirements. An early allowance of all claims is requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case(s), she is requested to telephone Tom Kocovsky at (216) 861-5582.

Respectfully submitted,

FAY, SHARPE, FAGAN,
MINNICH & MCKEE, LLP



Thomas E. Kocovsky, Jr.
Reg. No. 28,383
1100 Superior Avenue
Seventh Floor
Cleveland, OH 44114-2518
(216) 861-5582